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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/933,166	08/21/2001	Yuji Sano	122.1466	6450
21171	7590	09/07/2005	EXAMINER	
STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			LEE, WILSON	
			ART UNIT	PAPER NUMBER
			2821	

DATE MAILED: 09/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/933,166

Applicant(s)

SANO ET AL.

Examiner

Wilson Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 June 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte* Quayle, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) See Continuation Sheet is/are pending in the application.
- 4a) Of the above claim(s) 9,13-15 and 87-92 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2,3,8,10,11,16,17,19,20,22-25,28-32,71,73,74,76-79,82-86,96-98 and 100-115 is/are allowed.
- 6) ☒ Claim(s) 1,5-7 and 99 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 9,13-15 and 87-92 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 1/14/05
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Continuation of Disposition of Claims: Claims pending in the application are 1-3,5-11,13-17,19,20,22-25,28-32,71,73,74,76-79,82-92 and 96-115.

Claim Rejections – 35 U.S.C. 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 5, 6, 7, 99 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

In claim 99, “constant current source is provided separately from the driving device” has not been taught in the specification.

Claim Rejections – 35 U.S.C. 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000.

Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1, 99 are rejected under 35 U.S.C. 102(e) as being anticipated by Yamashita et al. (6,222,323).

Regarding Claim 1, Yamashita discloses that the first potential power supply line is a high potential power supply line (e.g. supply line J1) and the second potential power supply line is a low potential power supply line (GND).

Regarding Claim 99, Yamashita discloses a capacitive load (e.g. L1,1) driving circuit (See Figure 5) comprising:

- a driving device (Sa1) connecting a first potential power supply line (e.g. supply line above J1) to an output terminal (a1) connectable to a capacitive load (L1,1) ; and
- a power distributing circuit (J1) connected between the high potential power supply line and the driving device (Sa1) without providing another power distributing circuit (e.g. there is no other current source connected between the ground and the driving device) between a second potential power supply line (GND) and the driving device (Sa1), wherein the power distributing circuit is a constant-current device (J1) (See Figure 1), and the constant current source (J1) is provided separately from the driving device (Sa1) when the switch of the driving device is switched to the ground and the constant current source is still unchangeably powered.

Claims 1, 5-7 and 99 are rejected under 35 U.S.C. 102(e) as being anticipated by Ide et al. (6,304,038).

Regarding Claim 1, Ide discloses that the first potential power supply line is a high potential power supply line (to battery) and the second potential power supply line is a low potential power supply line (GND).

Regarding Claim 5, Ide discloses that a driving power supply source outputs a plurality of different voltage levels (during the activation on SW1-SW4), at equally divided voltage steps, to the high potential power supply line.

Regarding Claim 6, Ide discloses that the power distributing circuit (21) includes a plurality of power distributing units (B1 with SW3, C1 with SW1), one for each of the plurality of different voltage levels.

Regarding Claim 7, Ide discloses that each of the power distributing units has a function as a switch (SW1-SW4) for selecting one of the plurality of different voltage levels (See Figure 4).

Regarding Claim 99, Ide discloses a capacitive load (Co) driving circuit (See Figure 4) comprising:

- a driving device (22) connecting a first potential power supply line (to battery B1) to an output terminal connectable to a capacitive load (Co) ; and
- a power distributing circuit (21) connected between the first potential power supply line and the driving device (22) without providing another power distributing circuit between a second potential power supply line (Ground) and the driving device (22), wherein the power distributing circuit (21) is a

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constant current source (current supplied from DC battery), and the constant-current source (21) is provided separately from the driving device (22).

Restriction requirement

Claims 9, 13-15, 87-89, 90-92 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: Claims 9, 13-15 are directed to a species 2, a low power distributor for capacitive loads illustrated in Figures 10-12. And claims 87-89, 90-92 are directed to a species 4, a driving device integral with substrate illustrated in Figure 20. These groups are non-elected without traverse dated 11/2/04. Currently, the generic claim 99 is not allowable.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 9, 13-15, 87-89, 90-92 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Allowable subject matter

Claims 2, 3, 8, 10, 11, 16, 17, 19, 20, 22-25, 28-32, 71, 73, 74, 76-79, 82-86, 96-98, 100-115 are allowed.

Response to argument

Applicant's arguments with respect to claims 1, 5-7, 99 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

This application contains claims 9, 13-15, 87-89, 90-92 are drawn to an invention nonelected with traverse in Paper dated 11/2/04. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Wilson Lee whose telephone number is (571) 272-1824.

Papers related to Technology Center 2800 applications may be submitted to Technology Center 2800 by facsimile transmission. Any transmission not to be considered an official response must be clearly marked "DRAFT". The official fax number is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Wilson Lee
Primary Examiner
U.S. Patent & Trademark Office

9/2/05